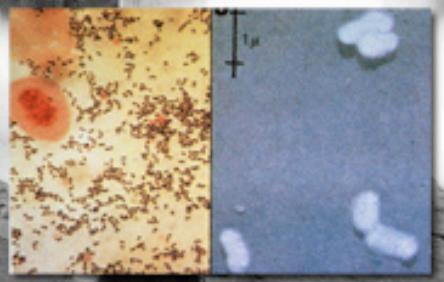
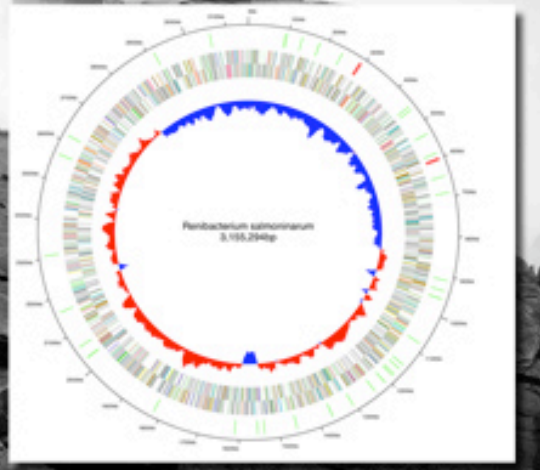
# Bacterial Kidney Disease - Challenge for the 21st Century

**November 15-17, 2005**
**Museum of History and Industry**
**Seattle, WA**





# Agenda

- Today:  Genomics of *R. salmoninarum*
- Wednesday
  - The Host and Disease
  - The Pathogen
  - BKD Prevention and Control
- Thursday
  - Commerce and Regulatory Issues
  - Roundtable discussion: next steps


- Project Title: Genome sequencing of the vertically-transmitted fish pathogen *Renibacterium salmoninarum*
- Project directors: Mark Strom (NWFSC/NOAA Fisheries), Greg Wiens (USDA/ARS National Center for Cool and Coldwater Aquaculture), and Dan Rockey (Dept. Biomedical Sciences, College of Veterinary Medicine, OSU)
- Funding: Joint USDA/CSREES and NSF Microbial Genome Sequencing Program, $500,000, 2 yrs
- Collaborators: University of Washington Genome Center, Integrated Genomics

# Project Timeline

- Funding obtained fall 2003
- UW Genome Center began sequencing January 2004
- First draft available August 2004, first ERGO analysis (Integrated Genomics)
- Manual annotation began September 2004
- UW closed genome late September 2005
- ERGO analysis on closed genome October 2005
- Genbank upload projected for December 2005-January 2006

# *R. salmoninarum* Genome Workshop

Keynote: From Sequence to Sickness: Using genomics and biotechnology to understand aquatic animal pathogens
*Laura Brown, National Research Council of Canada, Institute for Marine Biosciences*

Sequencing strategy and genome assembly and closing
*Rajinder Kaul, University of Washington Genome Center*

Genome annotation – the ERGO bioinformatics platform
*Anamitra Bhattacharyya, Integrated Genomics*

First Findings: Overview of the *R. salmoninarum* Genome and Examination of Antibiotic Resistance Genes and Cell Surface Proteins
*Mark Strom, Northwest Fisheries Science Center, NOAA Fisheries*

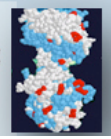
Novel Vaccine Targets and Assessment of Cellular Immunity
*Greg Wiens, National Center for Cool and Coldwater Aquaculture, USDA-ARS*

*Renibacterium salmoninarum* Genome Project

NOAA Northwest Fisheries Science Center

USDA ARS

OREGON STATE UNIVERSITY



# *R. salmoninarum* Genome Workshop

Training Undergraduates in Genome Analysis and Bioinformatics
*Dan Rockey, Department of Biomedical Sciences, College of Veterinary Medicine, Oregon State University*

Identification of the sortase enzyme and its substrates in *R. salmoninarum*: Solving problems with bioinformatics
*Samuel Crane, University of Washington*

Public release of *R. salmoninarum* Genome
*Strom / Wiens / Crane / Bhattacharyya*
Demonstration of planned availability
Tools for analysis
Clone and other information request methods
Live demonstration of ERGO